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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/616,891
	Filing Date	July 9, 2003
	First Named Inventor	Aylward
	Art Unit	3753
	Examiner Name	Hepperle
Total Number of Pages in This Submission	Attorney Docket Number	SWS-002 US

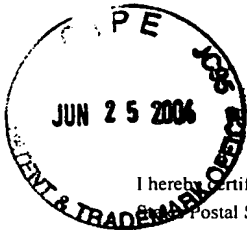
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Clifford B. Perry
Signature	
Date	June 21, 2004

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PATENT
Docket No.: SWS-002 US

On 21 JUNE 2004
By: Clifford B. Perry
Clifford B. Perry, Reg. No. 43,854

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/616,891
Applicants : Aylward et al.
Filed : July 9, 2003
Art Unit : 3753
Examiner : S.M. Hepperle

Docket No. : SWS-002 US
Customer No. : 30499
Confirm No. : 1686

Mail Stop Amendment
Commissioner for Patents
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**Remarks in view of cited
IDS References**

Dear Examiner:

Applicants herewith attach an Information Disclosure Statement citing UK Patent Application GB 2314580 (herein referred to as the Davenport reference) as cited by the European Patent Office in a counterpart PCT application. Applicants now provide the following remarks in support of the pending claims' patentability in view of the Davenport reference.

The Present Invention

The present invention provides systems and methods for collecting and distributing graywater in which a collection valve (160 in Fig. 1 in an exemplary embodiment) is located on a main drain line *down stream from one or more blackwater sources*, for example on the main drain line. The collection valve 160 includes an inlet, and an outlet connectable to a blackwater drain line (e.g. sewer main or septic tank line), or a graywater drain line, depending upon which water flow is sensed. Blackwater flow is detected by means of a black water sensor (141-143 in Fig. 1 in an exemplary embodiment) located on each of the blackwater sources. Locating the collection valve

down stream from one or more blackwater sources enables graywater collection from the main drain line, as opposed to collecting graywater from each graywater source, or requiring a separately-plumbed graywater system.

Independent claims 1 and 20 include the aforementioned limitation of locating the collection valve down stream of one or more black water sources:

Claim 1: “a collection valve located down stream from at least one of the one or more black water sources,”

Claim 20: “connecting on the main drain line and down stream from at least one of the one or more black water sources, a collection valve having....”

Independent claim 7 recites the above-described limitation in which sensors are located on black water sources to detect black water flow: “one or more black water sensors configured to detect water flow from the one or more black water source[s]”

The Davenport Reference

Referring now to the Davenport reference, Fig. 1 illustrates a diverter valve 13 located down stream from two graywater sources (bath 10 and sink 11), the diverter valve 13 configured to divert graywater flow to either a stored vessel 18 or soil stack 16. In particular, the Davenport reference does not show or suggest locating the diverter valve 13 downstream from one or more blackwater sources (e.g., a toilet, water softener unit, sink having a garbage disposal unit), as recited in independent claims 1 and 20 of the present invention. The Davenport reference illustrates a conventional separately plumbed graywater system in which two graywater sources 10 and 11 are plumbed together by means of pipe 12, apart from any blackwater sources. As can be understood from the discussion on page 3, 4th paragraph, the blackwater sources (such as a WC) are located down stream from the diverter valve 13:

“As shown in Fig. 1, waster water [from] bath 10 and one or more wash basins 11 is fed to a common waste pipe which is connected to a changeover valve 13. This valve can direct flow from the waste pipe 12 alternatively either via a pipe 14 with a trap 15, to a domestic soil stack 16, which in turns lead *from a household WC etc. to a sewer* (not shown);” (italics added)

Conventional graywater collection systems that require separately plumbed graywater sources suffer disadvantages as many existing plumbed structures are not separately plumbed, but instead have gray and blackwater sources interconnected only by means of the main drain line. In such a system, the conventional approach would require collecting graywater from each graywater source separately, or re-replumbing the structure to tie all graywater sources together to a single point up stream from any blackwater source.

Applicants note that Davenport discusses an instance in which unacceptable waste is drained into one of the graywater sources (pg. 2, last paragraph). However, this use does not convert the Davenport sink 11 into a blackwater source. As known in the art, a water source is defined as a gray or blackwater source based upon the grade of water it regularly produces; sinks and bathtub regularly producing graywater, and toilets regularly producing blackwater. While each source could be used to produce another grade of water (i.e., an empty toilet flushed to produce graywater), the source would still be considered black or gray, depending upon the grade of water it normally produces. Accordingly, the Davenport bath 10 and sink 11 would be considered graywater sources, and not blackwater sources as defined in the art.

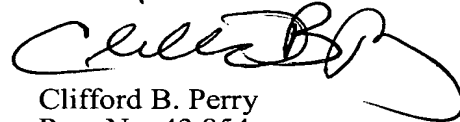
In view of the foregoing, Applicants assert that the Davenport reference does not show or suggest a collection valve located downstream from one or more blackwater sources, as recited in claims 1 and 20. Further, the Davenport reference does not show or suggest locating sensors on blackwater sources to detect the flow of black water. Further, none of the other cited references make up for either of these deficiencies. Accordingly,

claims 1, 7, and 20 are now allowable over the cited references. Additionally, as all of the remaining claims are dependent from at least one of these claims, they are allowable for at least the same reasons.

Conclusion

The Applicants submit that all pending claims are in condition for allowance and a notice to such effect is respectfully requested. If the Examiner believes that a telephone interview would expedite the prosecution of this case or if any questions arise, a call to the Applicants' representative, Clifford Perry, is invited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Clifford B. Perry', with a large, sweeping flourish extending to the right.

Clifford B. Perry
Reg. No. 43,854
Attorney for Applicants

449 Santa Fe Drive, #312
Encinitas, CA 92024
Tel: (760) 634-5652

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/616,891
Filing Date	July 9, 2003
First Named Inventor	Aylward
Art Unit	3753
Examiner Name	Hepperle
Attorney Docket Number	SWS-002 US

Sheet	1	of	1
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U. S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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